FIG.1

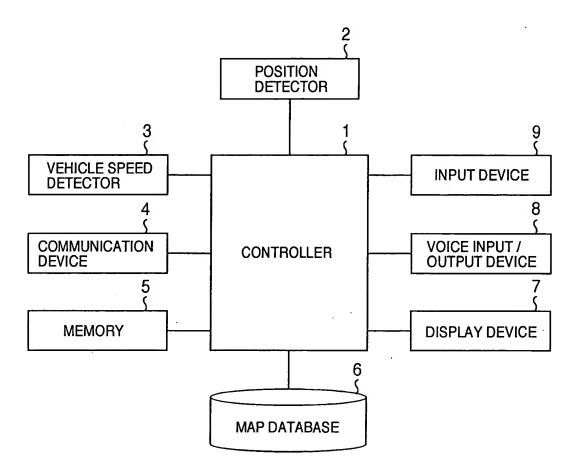


FIG.2

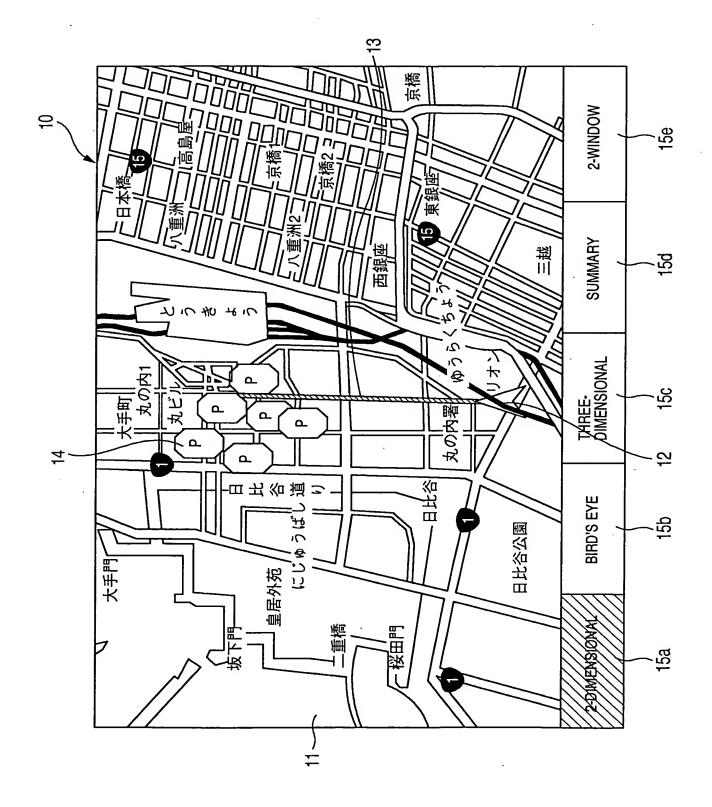
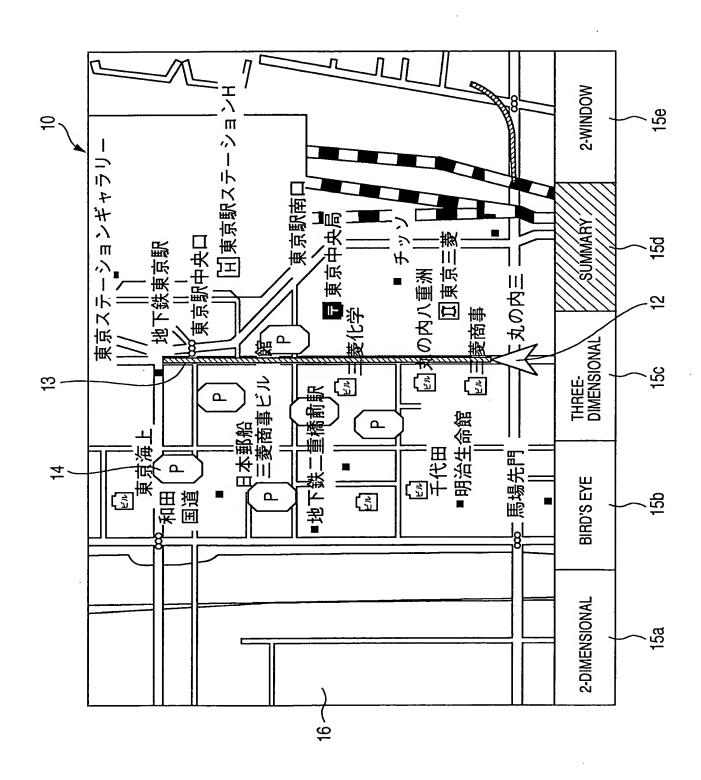
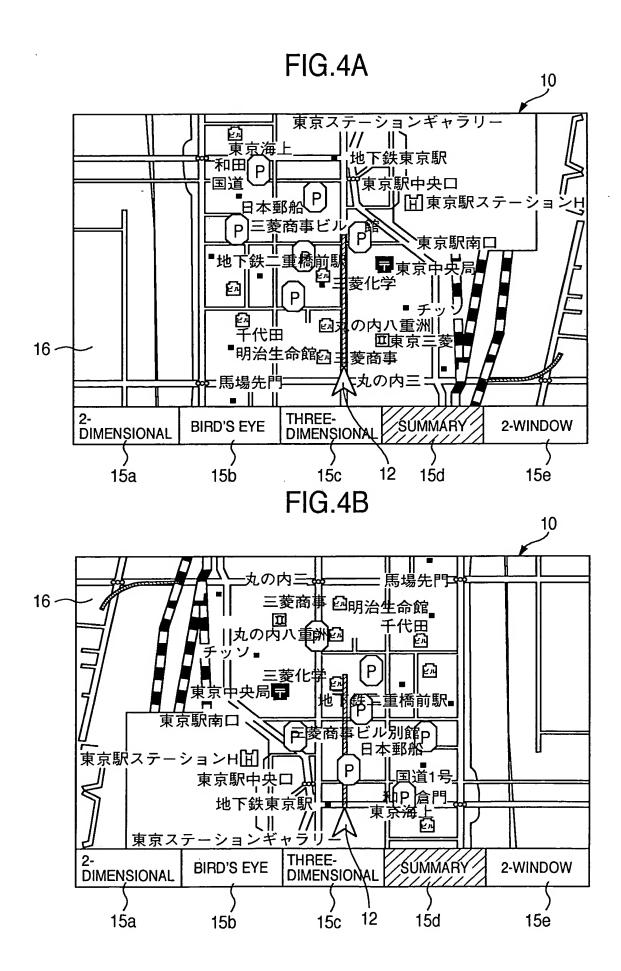


FIG.3





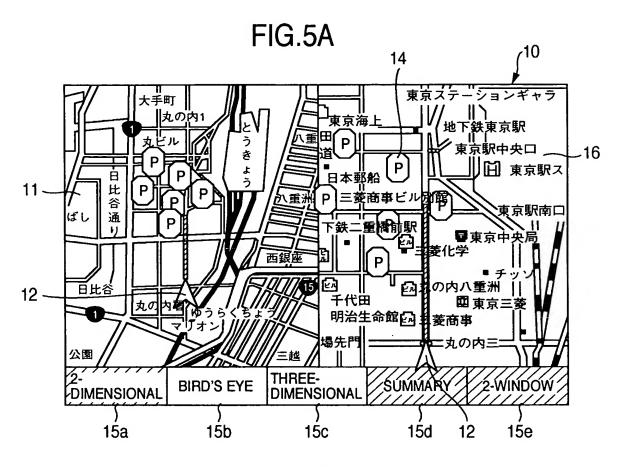


FIG.5B

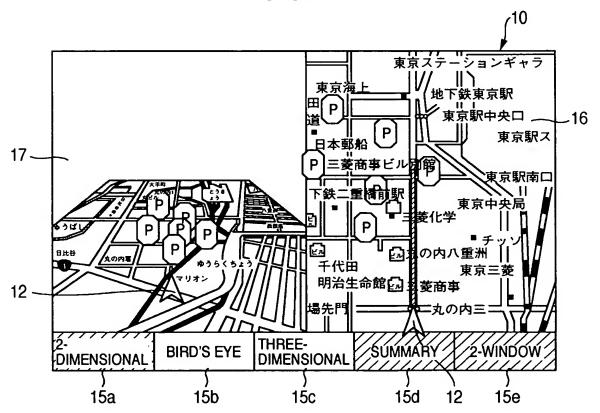


FIG.6

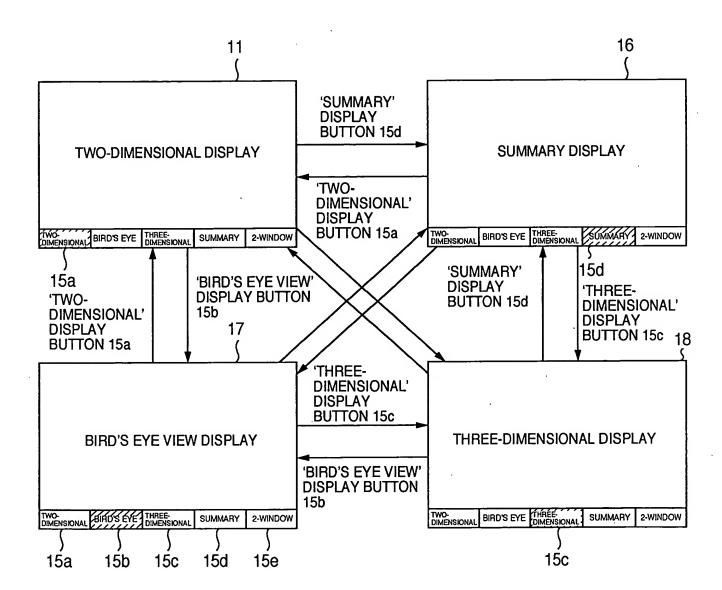


FIG.7

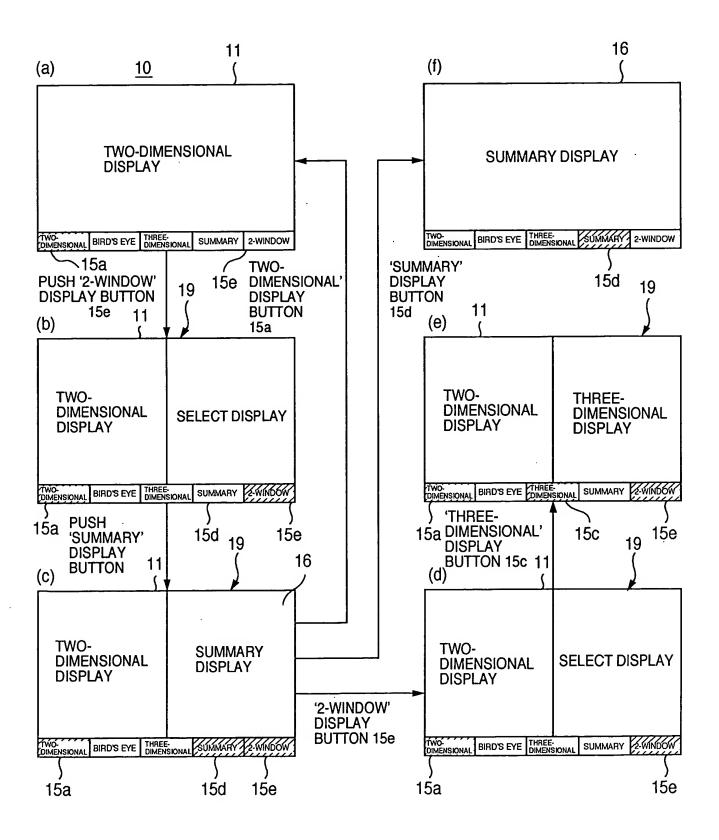


FIG.8

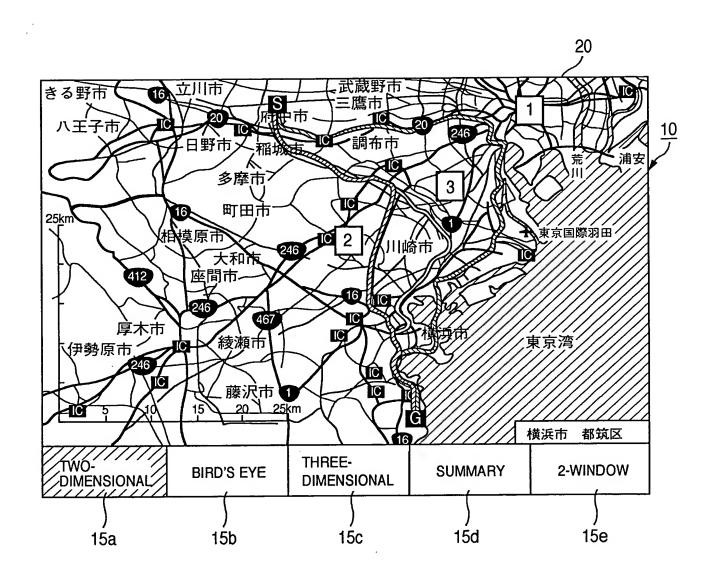


FIG.9

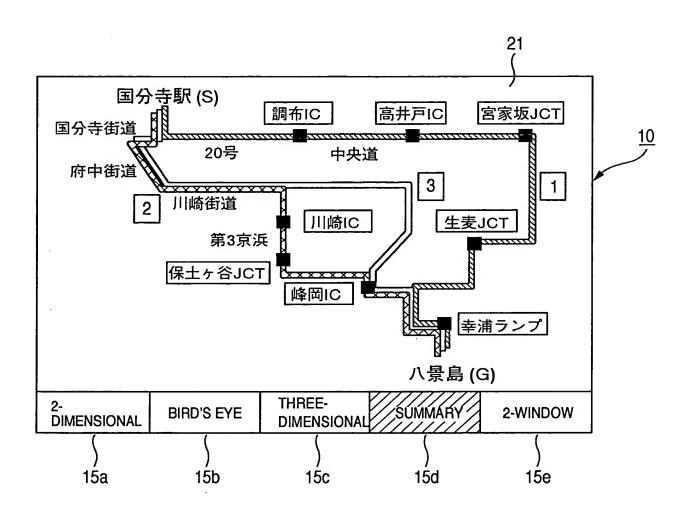


FIG.10

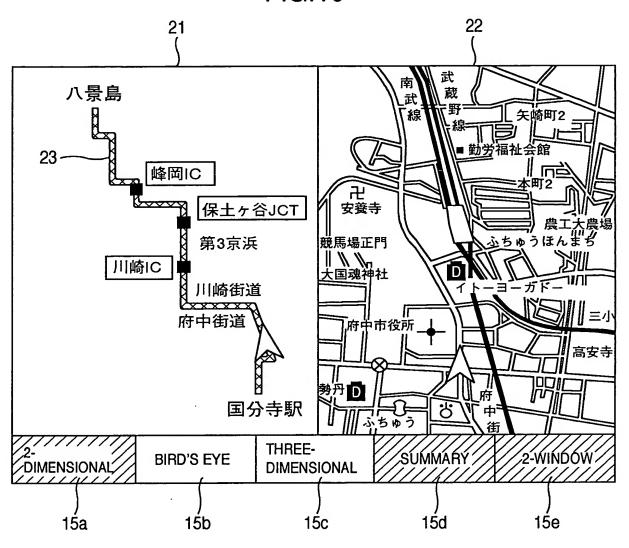


FIG.11

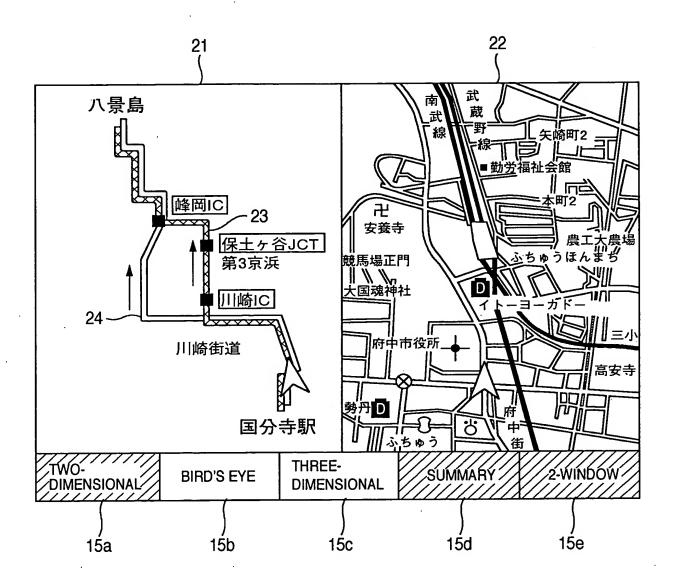


FIG.12

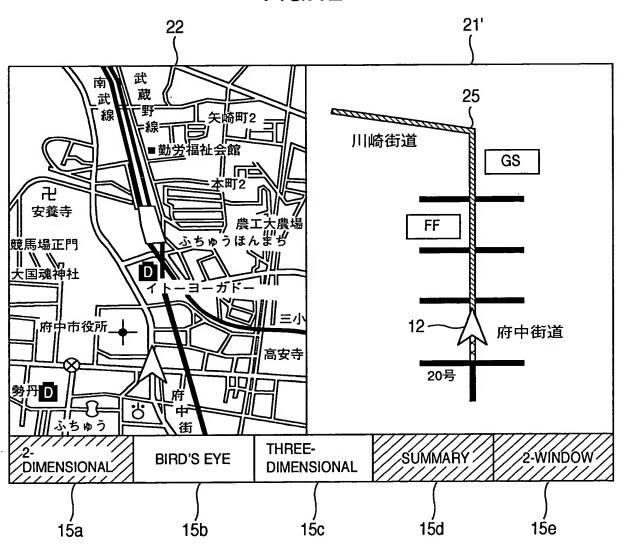
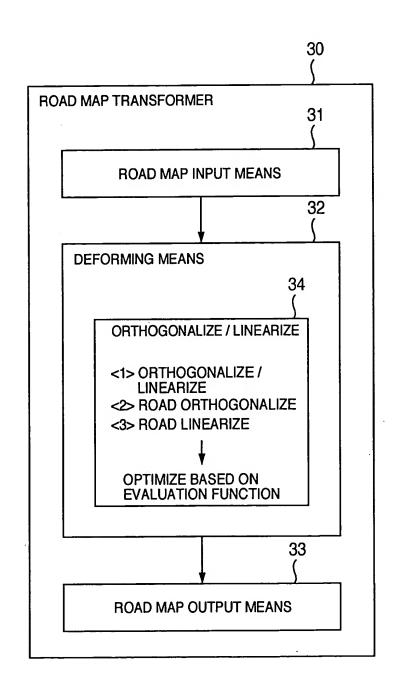
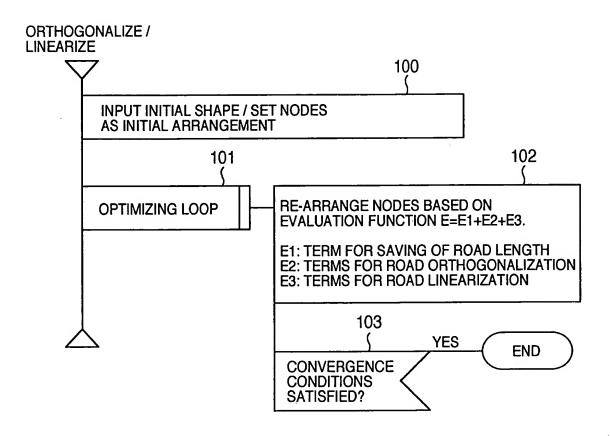


FIG.1 3



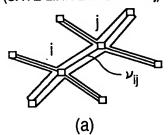
**FIG.14** 



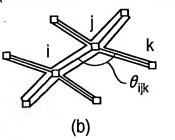
30a

## ORTHOGONALIZE/LINEARIZE

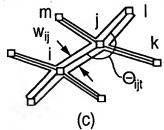
E1: EVALUATE EACH OF LINKS
CONNECTED BETWEEN NODES
(SAVE LINK LENGTH  $\nu$  ij)



E2: EVALUATE EACH RELATIVE ANGLE BETWEEN ADJACENT LINKS (NORMALIZE RELATIVE ANGLE  $\theta$  ijk)



E3: EVALUATE EACH RELATIVE ANGLE BETWEEN LINEAR LINKS (NORMALIZE RELATIVE ANGLE  $\theta$  ijl)



EVALUATION FUNCTION E=E1+E2+E3 → MINIMIZE

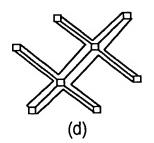


FIG.16

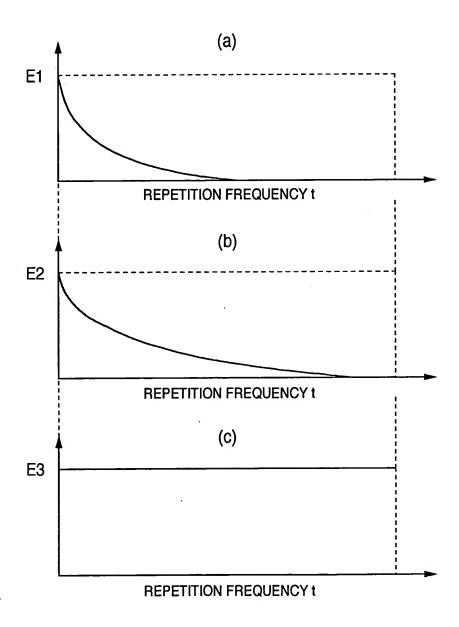


FIG.17

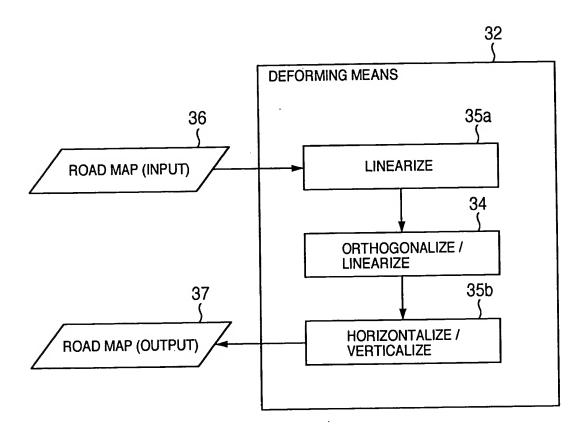


FIG.18

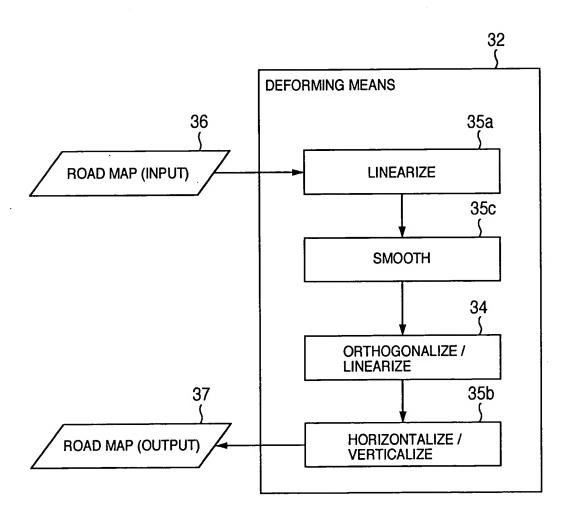


FIG.19

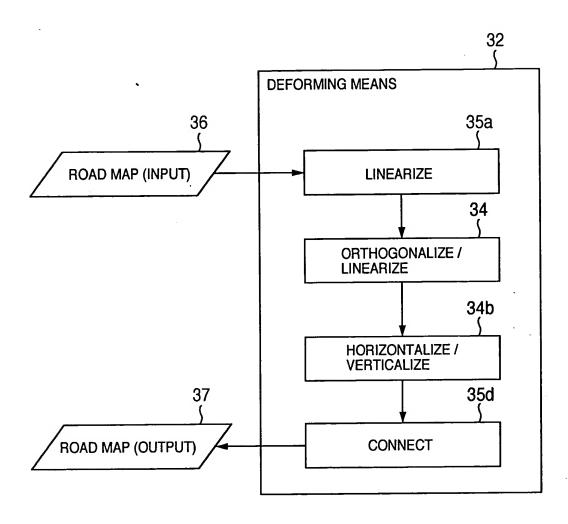


FIG.20

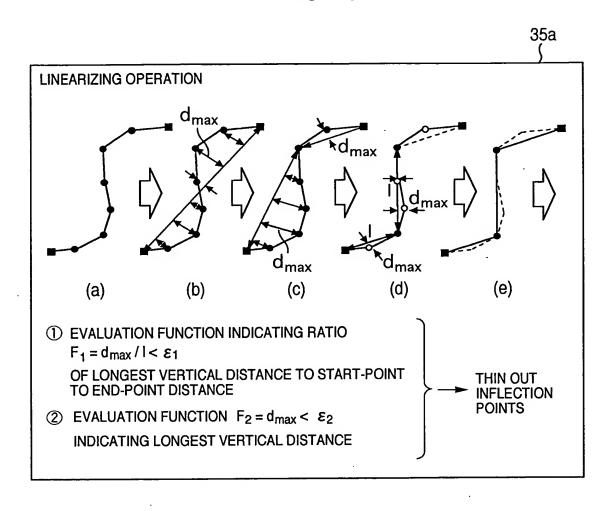
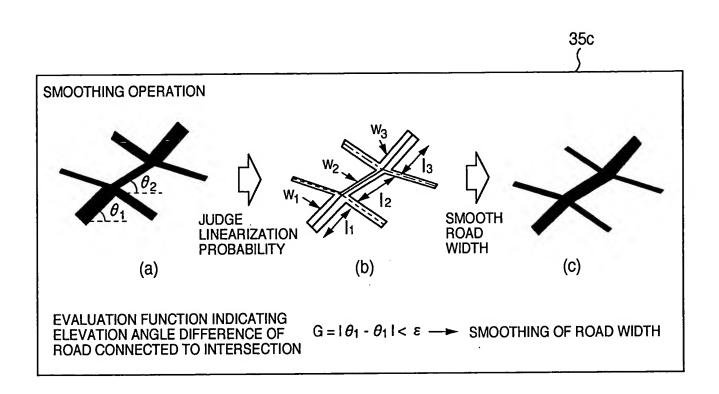
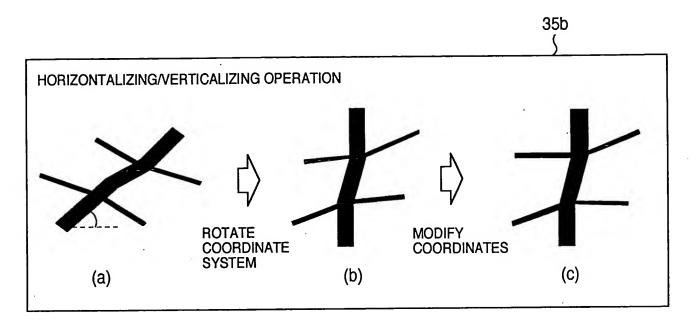


FIG.21



## FIG.22A



## FIG.22B

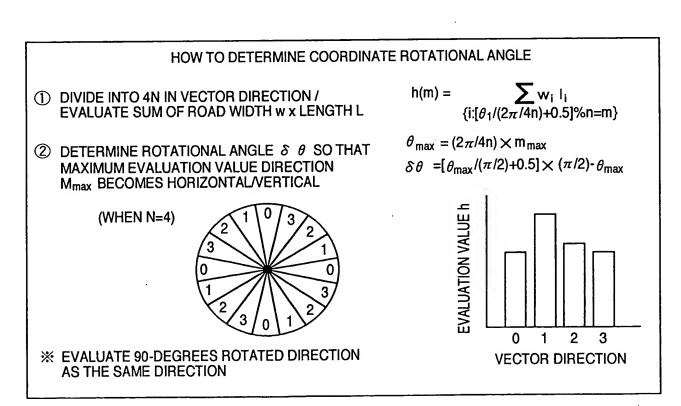


FIG.23

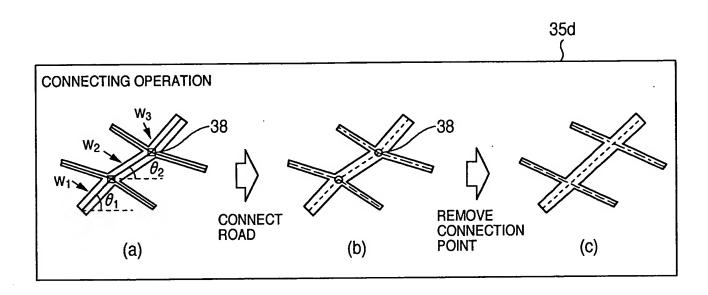


FIG.24

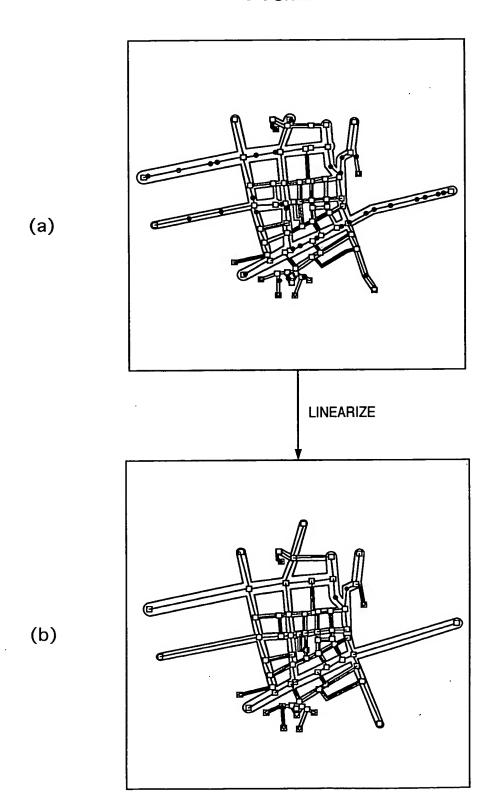


FIG.25

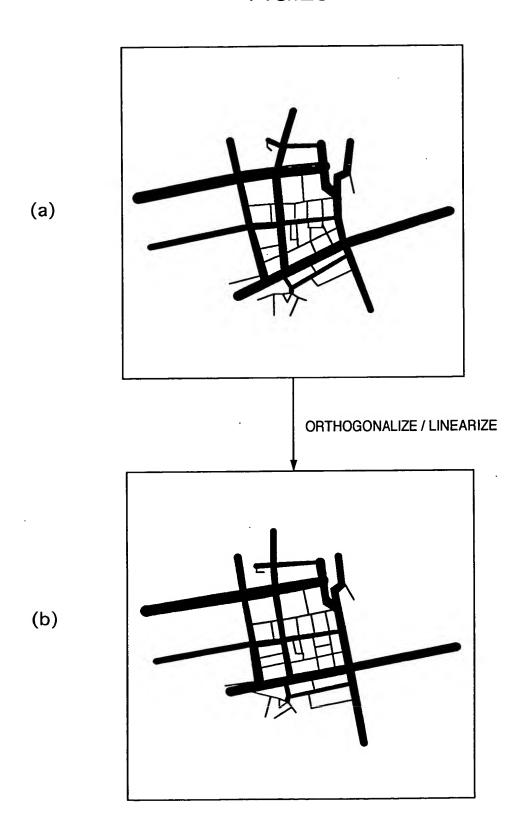


FIG.26

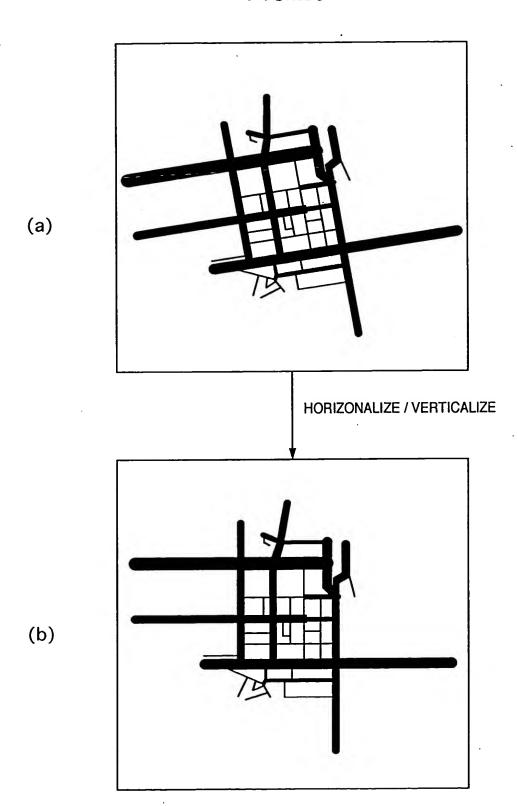


FIG.27

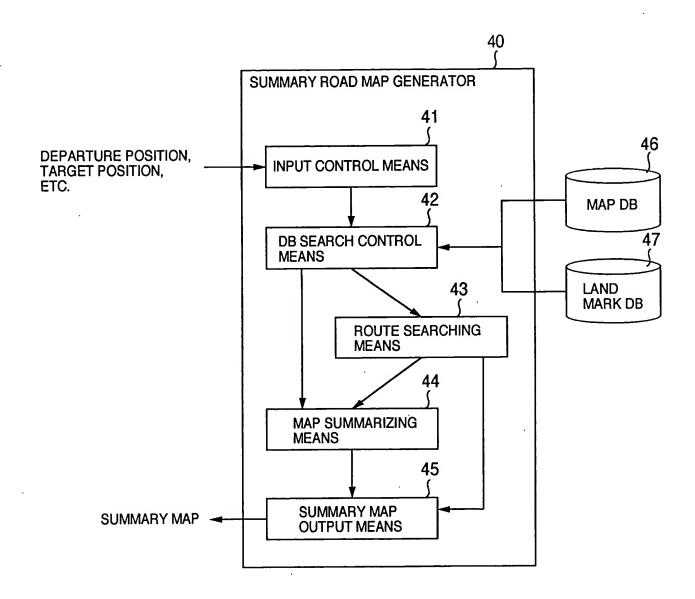


FIG.28

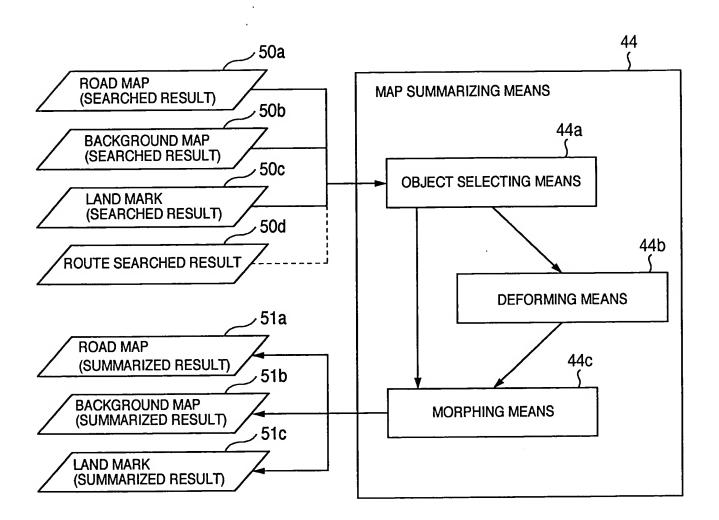
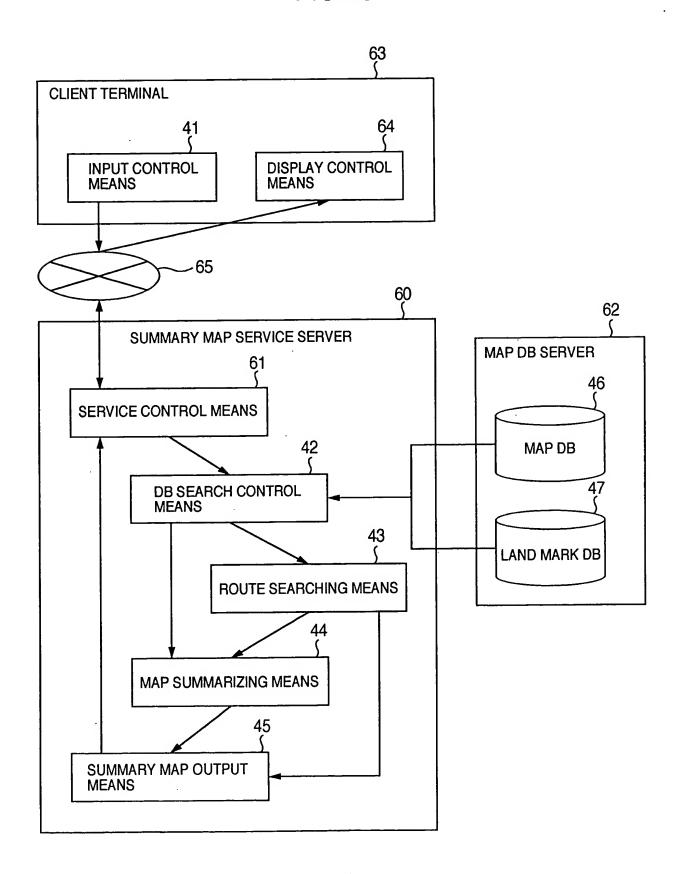
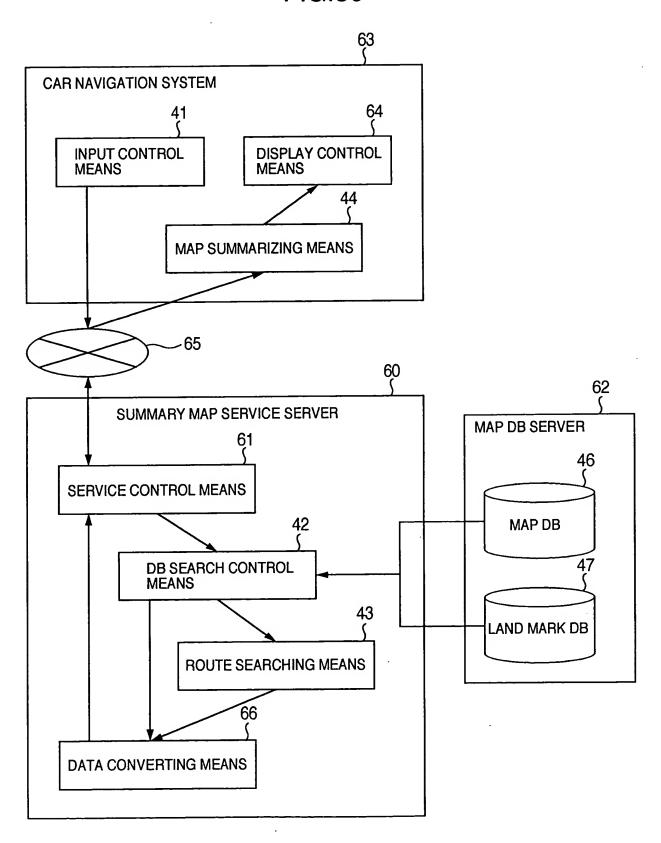


FIG.29



**FIG.30** 



**FIG.31** 

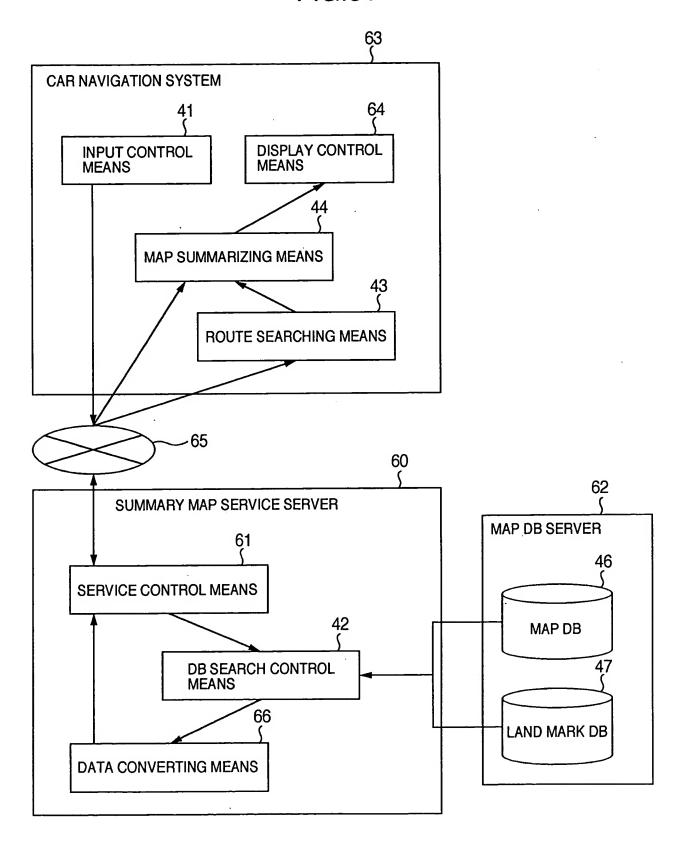
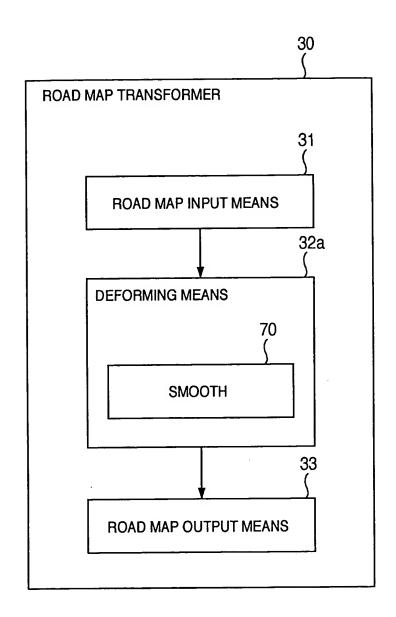


FIG.32



**FIG.33** 

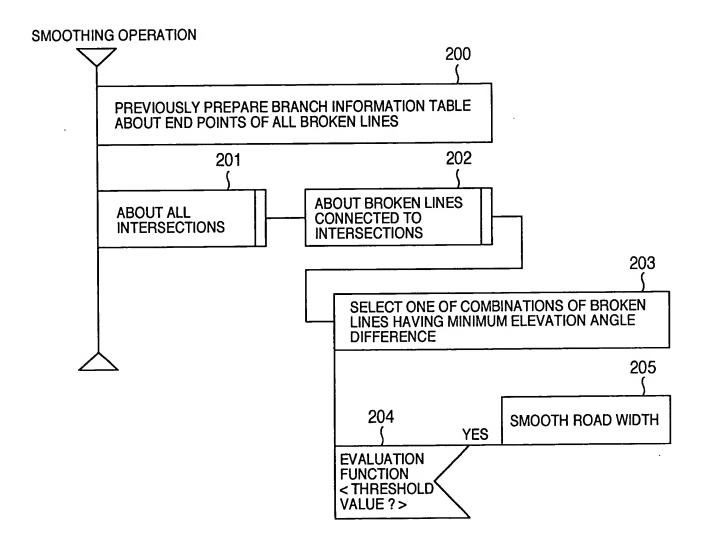
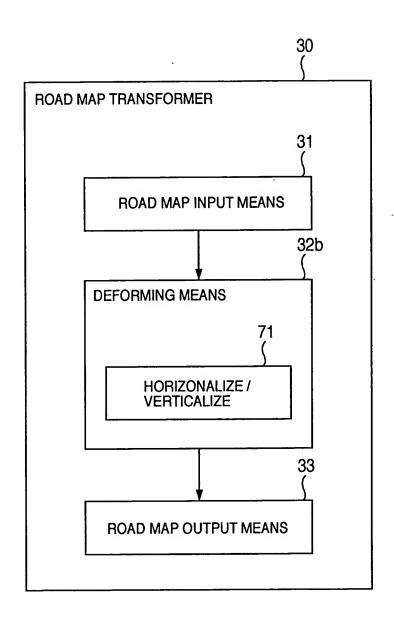


FIG.34



**FIG.35** 



